Air Quality Permitting
Technical Analysis

Tier II Operating Permit and Permit to Construct No. 027-00059

J. R. SIMPLOT – FOOD GROUP
NAMPA, IDAHO

Prepared By:

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Environmental Quality Management, Inc.

Project No. T2-010032

Date Prepared:

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FINAL PERMIT

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AIRS	Aerometric Information Retrieval Subsystem
AFS	AIRS Facility Subsystem
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EPA	United States Environmental Protection Agency
gr	Grains (1 lb = 7000 grains)
H_2S	Hydrogen Sulfide
IDAPA	A numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	Kilometer
lb/hr	Pound Per Hour
M	Thousand
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter with an Aerodynamic Diameter of 10 Micrometers or Less
PTC	Permit To Construct
SCFM	Standard Cubic Feet Per Minute
SIC	Standard Industrial Classification Code
SM	Synthetic Minor
SO_2	Sulfur Dioxide
T/yr	Tons Per Year
µm	Micrometers
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

PURPOSE

The purpose for this memorandum is to satisfy the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01 Sections 200 et seq. and 404, , for PTC and Tier II operating permits.

PROJECT DESCRIPTION

The J. R. Simplot Nampa Potato Plant (Simplot), located in Nampa, has requested renewal of Tier II Operating Permit No. 027-00059 originally issued on January 3, 1996 to Nestle Brands, Potato Division. Simplot also plans to install an anaerobic digester and related off-gas combustion equipment, which requires a permit to construct. Therefore, this air quality permit is both a Tier II and a Permit to Construct. The emissions sources at the facility are listed in Table 1.1.

Table 1.1 EMISSION SOURCES

Permit Sections	Source Description	Emission Controls
3	Nebraska MS-E-66 gas-fired boiler, 99.8 MM Btu/hr, installed 2001	Todd Lo NO_x Variflame burner
	Cleaver Brooks NS-F-84 gas-fired boiler, 70 MM Btu/hr	None
	Nine gas-fired make up air heaters, < 10 MM Btu/hr each	None
4	Main Line Dryer (gas-fired), National Drying, 1987 Cam, 21 MM Btu/hr	None
	Main Line Fryer, Heat and Control, FF6029-5-I-3F	None
	Specialty Line Dryer/Cooler, Proctor Schwartz, K21761	None
	Specialty Line Fryer, Gem Equipment, 1700	None
5	Anaerobic digester and Cleaver Brooks boiler, Model 700-350-160, 4.95 MM Btu/hr	Flare, Varec Model 244W

FACILITY DESCRIPTION

Except for the addition of the anaerobic digester, the description of this facility has not changed since the Nebraska Boiler was permitted in 2000. For process description, refer to the technical memorandum dated December 12, 2000 by Robert Baldwin, DEQ Air Quality Engineer.

ANAEROBIC DIGESTER PROJECT DESCRIPTION

The process water used for cleaning the potato, transporting the potatoes, and processing the potatoes is currently pretreated on site before being discharged to the City of Nampa for further treatment. The treatment involves screening, settling, and aeration. The Nampa facility is proposing to add an anaerobic digester to further treat the water before discharging it to the City of Nampa.

The anaerobic digester will generate biogas that will be burned in both a small boiler and in a flare. The boiler will be used to heat the wastewater. The excess biogas not needed for this will be burned in a flare. The pilot light for the flare will only operate intermittently when the biogas pressure drops below a certain level.

SUMMARY OF EVENTS

- August 13, 2001. DEQ received a request and application dated August 7, 2001, for renewal of Tier II Operating Permit No. 027-00059 originally issued to Nestle Brands, Potato Division on January 3, 1996.

- September 26, 2001. DEQ received a PTC application dated September 24, 2001, for an anaerobic digester and related off-gas combustion equipment.

  DEQ decided to process the applications together for a Tier II operating permit and permit to construct.
- February 15, 2002. DEQ determined the applications to be incomplete.
- March 15, 2002. DEQ received a revised modeling analysis.
- April 30, 2002. DEQ determined the applications complete.
- June 3, 2002. DEQ issued a draft permit for facility review.
- June 6, 2002 Simplot submitted comments on the facility draft.
- July 18, 2002. DEQ issued a proposed permit for public comment.
- August 28, 2002. The public comment period closed. Comments were received and responses have been prepared.
- August 30, 2002 DEQ received a letter from Simplot requesting to increase the heat input rating of the anaerobic digester boiler from 4.21 to 4.95 MM Btu/hr.

PERMIT HISTORY

The following is a summary of the permit files available to Environmental Quality Management, Inc.

January 3, 1996.	The original Tier II operating permit was issued for the facility, which was owned at that time by Nestle Brands, Potato Division.
December 15, 2000.	A PTC was issued for replacement of an existing Nebraska boiler with a new Nebraska boiler.

DISCUSSION

1. Emission Estimates

   Process equipment emissions have been recalculated by Simplot and are summarized in Table 7.1 of the permit. Emissions from all the combustion sources have been recalculated using the latest AP-42 emission factors and are presented in Appendix A.

2. Modeling

   The applicant conducted a modeling analysis of all the emission sources at the facility, including the new units combusting biogas from the anaerobic digester, using the ISCST3 model. As shown in Appendix B, the facility will not cause or contribute to a violation of any National Ambient Air Quality Standards (NAAQS) nor will it exceed the acceptable ambient concentration for hydrogen sulfide (H_2S) at IDAPA 58.01.01.585 in case of a flare flame out event.

3. Area Classification

   J. R. Simplot is located in Nampa, Canyon County, in AQCR 64. Canyon County is classified as attainment or unclassifiable for all state and federal criteria air pollutants.

4. Facility Classification

The facility is not a major facility as defined in IDAPA 58.01.01.006.55 or 008.10. It is not a designated facility as defined in IDAPA 58.01.01.006.27. The facility is classified as a B source because actual and potential emissions of regulated air pollutants are less than 100 T/yr.

5. Regulatory Review

This operating permit is subject to the following permitting requirements:

a.	IDAPA 58.01.01.401	Tier II Operating Permit
b.	IDAPA 58.01.01.403	Permit Requirements for Tier II Sources
c.	IDAPA 58.01.01.404.01(c)	Opportunity for Public Comment
d.	IDAPA 58.01.01.404.04	Authority to Revise or Renew Operating Permits
e.	IDAPA 58.01.01.406	Obligation to Comply
f.	IDAPA 58.01.01.470	Permit Application Fees for Tier II Permits
g.	IDAPA 58.01.01.625	Visible Emission Limitation
h.	IDAPA 58.01.01.650	General Rules for the Control of Fugitive Dust
i.	IDAPA 58.01.01.676 and 677	Particulate Matter Emission Limits for New and Existing Fuel-burning Equipment
j.	IDAPA 58.02.02.775-776	Rules for Control of Odors
k.	40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
l.	IDAPA 58.01.01.200 et seq.	Permits to Construct

6. Permit Conditions

6.1 Existing Sources

Emission limits for the process equipment have been revised based on new estimates from the facility. The previous throughput limit has been deleted because it is not necessary to ensure the facility is not a major source. The emission limits from the December 15, 2000 PTC for the Nebraska boiler have been included in this permit. Emissions limits for the other natural combustion sources have been revised based on the latest AP-42 emission factors. Emission limits have been set only for those pollutants whose potential emissions exceed 10% of the significant emission rates defined at IDAPA 58.01.01.006.92.

6.2 New Sources (Anaerobic Digester and Related Combustion Equipment)

An annual emission limit for SO_2 has been set and compliance is determined monthly for the previous 12-month period based on monitoring of biogas flow and H_2S concentration. No emission limit for H_2S has been set, since emissions are negligible under normal operations.

The flare and boiler are subject to the 20% opacity limit under IDAPA 58.01.01.625. No monitoring or recordkeeping requirement specific to this rule was required in the permit due to very low probability of a violation (most of the gases are methane).

Since the gases contain H_2S, which has a very low odor threshold, the permit contains specific provisions related to compliance with IDAPA 58.01.01.775-776, *Rules for Control of Odors* (see below).

Because of the likelihood of odor complaints and possible H_2S health effects in the case of a flame-out of the flare, the permit requires the installation of an alarm system to notify the operating personnel of such an occurrence. Records of the time and duration of all flame-out periods must be kept.

The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall at a minimum, include the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Additionally, the applicant submitted a request after the close of the public comment period to be allowed to increase the design capacity of the digester boiler from 4.21 MM Btu/hr to 4.95 MM Btu/hr. After review in the state Air Program office, the permit was updated to reflect the 4.95 MM Btu/hr boiler. This change does not affect the overall standard for SO2 emissions as stated in the permit for the digester flame and boiler at 26.9 T/yr. There are calculated increases in emissions for PM10, NOx and CO from increasing the boiler heat input rating by 0.74 MM Btu/hr. Because these increases are so small, they would have negligable effect on the overall facility-wide modeling results. The difference in PTE from the 4.21 to the 4.95 MM Btu/hr digester gas boiler is as follows: 0.04 to 0.06 T/yr for PM10, 0.48 to 0.78 T/yr for NOx, and 0.40 to 0.65 T/yr for CO.

7. AIRS

AIRS/AFS[a] FACILITY-WIDE CLASSIFICATION[b] DATA ENTRY FORM

AIR PROGRAM / POLLUTANT	SIP [c]	PSD [d]	NSPS [e] (Part 60)	NESHAP [f] (Part 61)	MACT [g] (Part 63)	TITLE V	AREA CLASSIFICATION A – Attainment U – Unclassifiable N – Nonattainment
SO_2 [h]	B						A
NO_x [i]	B						U
CO [j]	B						U
PM_{10} [k]	SM						U
PT (Particulate) [l]	SM		SM				A
VOC [m]	SM						U
THAP (Total HAPs) [n]	NA						NA
			APPLICABLE SUBPART				
			Dc				

[a] Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

[b] AIRS/AFS Classification Codes:
- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant which is below the 10 ton-per-year (T/yr) threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).

FEES

Fees apply to this facility in accordance with IDAPA 58.01.01.470. The facility is subject to Tier II permit application fees of $500.

RECOMMENDATIONS

Based on the review of the application materials, and all applicable state and federal regulations, staff recommends that DEQ issue a final Tier II operating permit and PTC to J. R. Simplot. An opportunity for public comment on the air quality aspects of the proposed operating permit shall be provided in accordance with IDAPA 58.01.01.404.01.c.

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cc: Joan Lechtenberg, Air Quality Division
Kent Berry, EQM
Mike McGown, Boise Regional Office

APPENDIX A

EMISSION ESTIMATES FOR SIMPLOT COMBUSTION SOURCES

Potential Emissions from Combustion Sources at J.R. Simplot - Nampa

Source Description	Firing Rate		Emission Factors[1]					Potential Hourly Emissions[2]					Potential Annual Emissions[2]				
	(MMBtu/hr)	(MMscf/hr)	PM/PM_{10} (lb/MMscf)	SO_2 (lb/MMscf)	NO_x (lb/MMscf)	CO (lb/MMscf)	VOC (lb/MMscf)	PM/PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)	PM/PM_{10} (ton/yr)	SO_2 (ton/yr)	NO_x (ton/yr)	CO (ton/yr)	VOC (ton/yr)
Cleaver Brooks Boiler	70	0.068	7.6	0.6	100	84	5.5	0.51	0.04	6.77	5.69	0.37	2.25	0.18	29.65	24.91	1.63
Nebraska Boiler*	99.8	0.097	7.6	0.6	44.5	84	5.5	0.73	0.06	4.30	8.11	0.53	3.21	0.25	18.81	35.51	2.33
Air Make-up Units	37.2	0.036	7.6	0.6	100	84	5.5	0.27	0.02	3.60	3.02	0.20	1.20	0.09	15.76	13.24	0.87
			(lb/hr)	(lb/MMscf)	(lb/MMscf)	(lb/MMscf)	(lb/MMscf)										
Main Line Dryer	21	0.020	8.0	0.6	100	84	5.5	8.00	0.01	2.03	1.71	0.11	35.04	0.05	8.90	7.47	0.49
				(lb/day)**													
Biogas		0.0065	7.6	147	100	84	5.5	0.05	6.13	0.65	0.55	0.04	0.22	26.83	2.85	2.39	0.16

* Low NO_x Burning Boiler NO_x Emission Factor from site specific information

** Based on 2.3 lb-mole/d of H_2S in biogas

1. Emission Factors derived from 5th Edition AP-42, 1.4 Natural Gas Combustion, Table 1.4-1 and 1.4-2
2. Potential emissions calculated assuming 8760 hr/yr of operation

APPENDIX B

REPORT ON DISPERSION MODELING ANALYSIS

Dispersion Modeling Analysis
J.R. Simplot Company, Nampa, Idaho

Introduction

In this Appendix, MFG, Inc. (MFG) describes the results of a revised dispersion modeling analysis conducted on behalf of the J.R. Simplot Company (Simplot) for its Nampa Plant. This modeling analysis is identical to the analysis submitted with the August 7, 2001 Tier II Permit application with two exceptions. As requested in a February 15, 2002 letter from Mike Simon of DEQ, the modeling analysis includes the sources associated with the anaerobic digester for which Simplot submitted a PTC application on September 24, 2001. These sources are a digester gas-fired boiler and a flare that combusts the overflow digester gas. Also in the February 15, 2002 letter, Mike Simon requested that the analysis include a "flare flame-out" scenario to examine the hydrogen sulfide emissions associated with the digester in the event the flare stops operating.

The location of Simplot's Nampa facility is shown in Figure 1. As in the previous analysis, our modeling supports Simplot's Tier II Operating Permit application. We apply current regulatory dispersion modeling tools to investigate whether the emission rates presented in this permit application would contribute to or cause a violation of National Ambient Air Quality Standards (NAAQS).

Dispersion Modeling Techniques

As in the modeling analysis that is described in the August 2001 Tier II Permit application, we used ISCST3 in this revised dispersion modeling analysis. An applicable discussion of the dispersion modeling selection and techniques used in this modeling analysis is included in the August 2001 Tier II Permit application.

The entire facility, including the proposed boiler and flare associated with the waste water treatment facility, are shown in Figure 2.

Rural conditions. We used the same assumptions that are discussed in the August 2001 Tier II Permit application.

Emission rates. Table 1 lists the short-term and annual emission rates used by MFG in our modeling analysis. Burl Ackerman, the Environmental Manager at Simplot's Nampa facility, provided the emission rates.

Table 1 also displays the hydrogen sulfide emission rate that would be associated with the "flare flame-out" scenario. Even though the boiler would continue to operate during a "flare flame-out" situation, we calculated the worst-case hydrogen sulfide emission rate by combining the sulfur dioxide emission rates of the flare and the digester gas-fired boiler. This scenario assumes all of the hydrogen sulfide would pass, unburned, through the flare stack. The emission rate for the two pollutants is the same on a molar basis, but not on a mass basis. We used the molecular weights of the two pollutants to calculate the hydrogen sulfide mass emission rate.

Stack parameters and building configuration. Ground level concentrations are heavily influenced by release characteristics including stack parameters and wakes from nearby structures. MFG used the stack parameters shown in Table 2 in our analysis. The stack parameters in Table 2 were also provided by Burl Ackerman.

Due to the difficult nature of modeling open flares, the stack parameters for the digester gas-flare were calculated using EPA guidance. We used the Screening Procedures for Estimating the Air Quality Impact of Stationary Sources handbook (EPA-450/4-88-010) to calculate the release height, exit velocity, exit temperature and effective stack diameter of the biogas flare.

We used the same methodology for modeling the non-point sources as in the August 2001 Tier II Permit application. A more detailed description of the modeling methodology associated with these types of sources is included in the previous modeling report.

As in the modeling analysis for the August 2001 Tier II Permit application, we used the EPA Building Profile Input Program (BPIP) to calculate wind direction dependent building parameters for each stack potentially influenced by building downwash effects. Figure 2 shows the relationship between the stacks and the Nampa Plant's buildings used in our model simulations.

Also in Figure 2, the doors on the potato storage buildings are labeled one through seven. Potatoes are unloaded from each of these doors; however, operations occur near only one of the seven doors at a time. As in the previous modeling analysis, to account for the changing location of these emissions in the model, we established seven different volume sources that represent the doors. We prepared seven emission profiles for PM10 for each year of meteorological data. Each profile contains all of the sources at the facility, including the seven potato storage building doors; however, only one of the seven doors was given a nonzero emission rate in each profile. This methodology was used to model the PM10 impacts associated with emissions from each of the potato storage building doors.

Receptor network. We used the same nested receptor network that is described in the August 2001 Tier II Permit application. The receptor grid is displayed in Figure 3.

Meteorological data. We used the same five-year meteorological database as in the August 2001 Tier II Permit application. A discussion concerning the applicability of that data to the project site is included in that application.

Background concentrations. To assess compliance with the NAAQS, MFG added pollutant concentrations attributable to the Nampa Plant to ambient background concentrations. The background concentrations for the Nampa area are displayed in Table 3. The PM10 background concentrations were obtained in an email from Mary Anderson of DEQ on July 31, 2001 while the sulfur dioxide, nitrogen dioxide and carbon monoxide background concentrations were obtained during a July 3, 2001 telephone conversation with Mary Anderson. DEQ considers these values representative of the Nampa area.

Dispersion Modeling Results

MFG applied the ISCST3 model to simulate proposed emissions, including the boiler and flare associated with the anaerobic digester and the "flare flame-out" scenario, from the Nampa facility using five-years of meteorological data and other modeling assumptions discussed above. The results of the dispersion modeling are summarized in Tables 3 and 4. Table 3 displays the comparison between the maximum criteria pollutant concentrations from the Nampa facility, with the addition of background concentrations, to the NAAQS. Table 4 describes the results of the "flare flame-out" scenario modeling. The modeling results are discussed below.

Criteria pollutant modeling results. Our modeling shows the maximum project contributions, when added to an ambient background concentration, comply with the ambient standards. Due to the similarities between the results of this modeling analysis and the previous analysis, we did not include contour plots of the maximum criteria pollutant concentrations. The August 2001 Tier II Permit

application contains contour plots for each of the criteria pollutants that are very similar to the contour plots associated with this modeling analysis.

As in the previous modeling analysis, the higher concentrations from the annual and 24-hour averaging periods align with the prevailing wind directions. For all of the pollutants and averaging periods, the higher concentrations occur very close to the facility fence line and the concentrations droperating permit off rapidly with increasing distance from the property boundary.

"Flare Flame-Out" Scenario. Our modeling analysis demonstrates that the maximum hydrogen sulfide concentrations associated with the "flare flame-out" scenario comply with the Acceptable Ambient Concentration (AAC) for hydrogen sulfide. Figure 4 displays a contour plot of the maximum hydrogen sulfide concentration at each receptor.

Summary

MFG conducted a revised dispersion modeling analysis to support a Tier II Permit application for Simplot's Nampa facility. The revisions involved adding the two sources associated with the anaerobic digester, a flare and a boiler, to the modeling analysis described in the August 7, 2001 Tier II Permit application. As in the previous analysis, we assessed proposed criteria pollutant emission limits by comparing conservative predictions from the ISCST3 guideline model to the NAAQS. We also examined the hydrogen sulfide emissions associated with the "flare flame-out" scenario. The concentrations associated with this scenario were compared to the appropriate AAC. Our dispersion modeling used a five-year meteorological database from Boise Airport, a nested receptor grid with 50 m inner resolution, terrain elevations from USGS quadrangles and modeling assumptions appropriate for rural conditions. Contributions for sources other than the Nampa facility were accounted for by adding model predictions to background concentrations obtained from DEQ staff.

Our analysis indicates that the Nampa facility, operating at the emission rates presented in this application, complies with the NAAQS and AAC. In our opinion, the techniques used in our analysis are conservative, and it is likely that actual concentrations near the facility are much lower.

Table 1. J.R. Simplot-Nampa Short and Long Term Emission Rates									
		PM10		SO2		NOx		CO	
Source	ID Code	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Cleaver Brooks Boiler	201	0.51	2.25	0.04	0.18	6.77	29.65	5.69	24.91
Nebraska Boiler	208	0.73	3.21	0.06	0.25	4.29	18.81	8.11	35.50
Main Line Fryer	301	3.75	16.43	NA	NA	NA	NA	NA	NA
Specialty Line Fryer 302	302	2.75	12.05	NA	NA	NA	NA	NA	NA
Specialty Line Dryer	303	0.7	3.07	NA	NA	NA	NA	NA	NA
Specialty Line Dryer/Cooler	304	0.7	3.07	NA	NA	NA	NA	NA	NA
Main Line Dryer Stack (each)	203	1.0	4.38	0.003	0.01	0.51	2.22	0.43	1.87
Main Building[a]		0.351	1.54	0.025	0.11	3.80	16.64	3.19	13.98
Dirt Haul	702	0.192	0.84	NA	NA	NA	NA	NA	NA
Potato Storages[b]	703	0.062	0.27	NA	NA	NA	NA	NA	NA
Digester Gas Flare		0.041	0.18	5.10	22.3	0.539	2.36	0.452	1.98
Digester Gas Boiler		0.008	0.04	1.04	4.6	0.109	0.48	0.092	0.40
"Flare Flame-Out" Scenario-Flare[c]		NA	NA	3.26	14.3	NA	NA	NA	NA

A - The main building emission rate includes the 9 make up air units, the potato delivery emissions (704), and the paved road emissions (801).

B - The potato storage area emission rate includes an 80% control factor because the operating permiterations occur inside of buildings.

C – The "flare flame-out" scenario emissions are hydrogen sulfide, not sulfur dioxide.

Table 2. J.R. Simplot-Nampa Source Parameters						
Source	Flow Rate (acfm)	Diameter (meters)	Temp (K)	Height (meters)	Initial Sigma y[a] (meters)	Initial Sigma z[b] (meters)
Cleaver Brooks Boiler	14,000	0.91	449.82	15.54	NA	NA
Nebraska Boiler	31,200	1.07	433.15	15.85	NA	NA
Main Line Fryer	8,400	0.91	352.59	15.24	NA	NA
Specialty Line Fryer 302	4,943	0.41	372.04	15.54	NA	NA
Specialty Line Dryer	7,492	0.70	299.82	12.50	NA	NA
Specialty Line Fryer/Dryer	6,452	0.70	335.93	12.80	NA	NA
Main Line Dryer Stack (each)	10,493	1.07	312.04	14.63	NA	NA
Main Building	NA	NA	NA	3.35	11.2	3.12
Dirt Haul	NA	NA	NA	0.61	9.72	3.12
Potato Storages	NA	NA	NA	0.6	3.49	3.54
Digester Gas Flare[c]	NA	0.36	1273	4.92	NA	NA
Digester Gas Boiler	1,300	0.30	422.04	6.1	NA	NA
"Flare Flame-Out" Scenario-Flare[d]	108	0.51	298.2	3.05	NA	NA

a – Initial sigma y is the initial lateral dimension of the volume source.

b – Initial sigma z is the initial vertical dimension of the volume source.

c – The biogas flare parameters were calculated using the Screening Procedures for Estimating the Air Quality Impact of Stationary Sources handbook (EPA-450/4-88-010). These procedures do not calculate a flow rate; algorithms in ISC calculate this value.

d – The exit temperature for the flame-out scenario is the low end of a range given for the temperature of the material in an anaerobic digester. The information was found on the Oregon Office of Energy website on March 1, 2002. http://www.energy.state.or.us/biomass/digester/digestech.htm

Table 3. Comparison of Maximum Predicted Concentrations with National Ambient Air Quality Standards.					
Pollutant	Period	Maximum Nampa Contribution ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Max Nampa plus Background ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)
PM10[a]	24 Hour	47	103	150	150
	Annual	10	34.6	45	50
NO_2[b]	Annual	33	40	73	100
SO2	3 Hour	445	374	819	1,300
	24 Hour	163	120	283	365
	Annual	28	18.3	46	80
CO	1 Hour	2,017	11,450	13,467	40,000
	8 Hour	512	5,153	5,665	10,000
a – PM10 24-hour concentration is the highest of the second highest concentrations. b – 100% of the NOx predictions were conservatively assumed to be NO_2.					

Table 4. Comparison of Maximum Predicted Hydrogen Sulfide Concentrations with Acceptable Ambient Concentrations.			
Pollutant	Period	Maximum Nampa Contribution ($\mu g/m^3$)	AAC ($\mu g/m^3$)
Hydrogen Sulfide	24-Hour	531.5	700

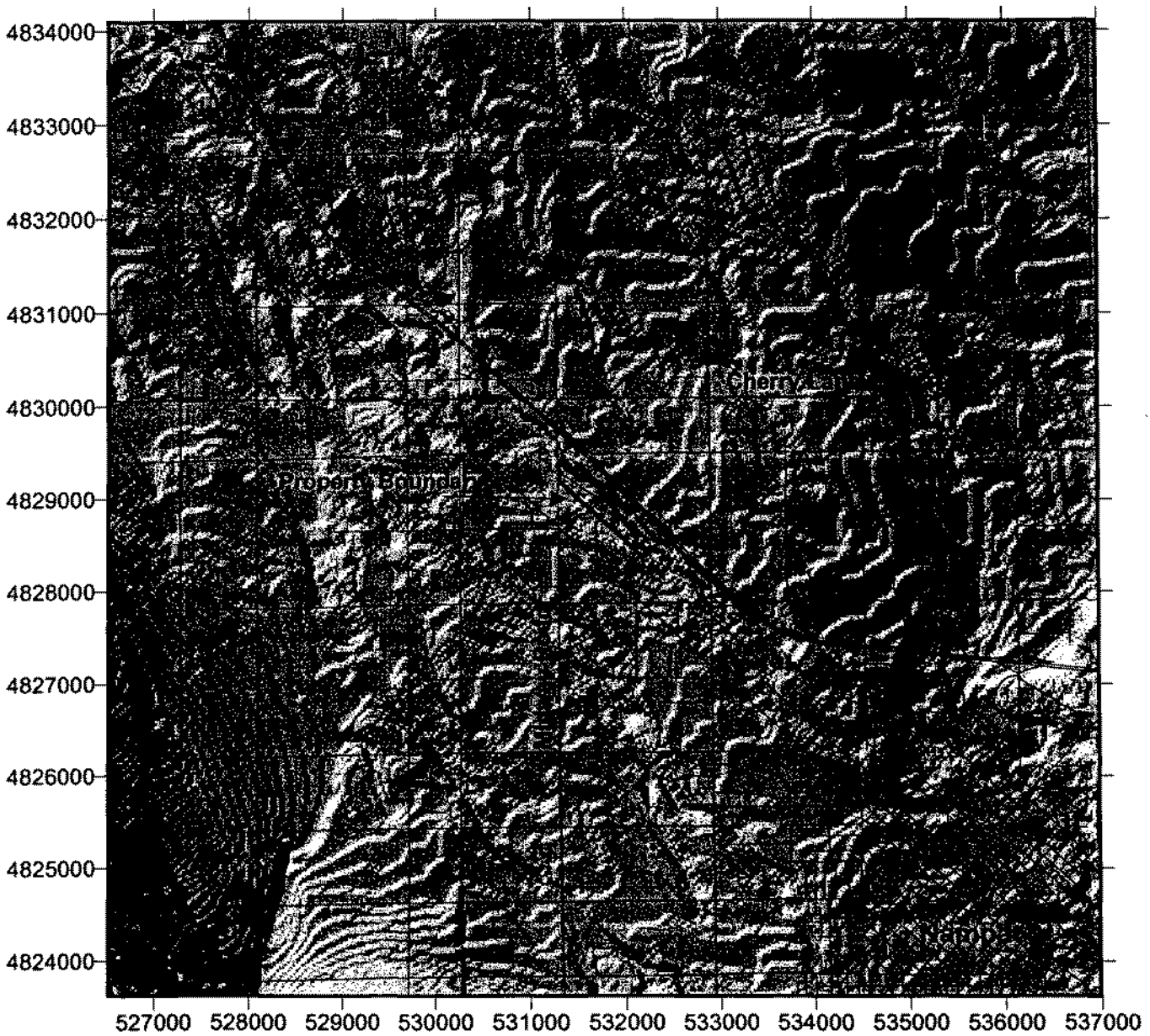

Figure 1. J.R. Simplot Nampa Facility.

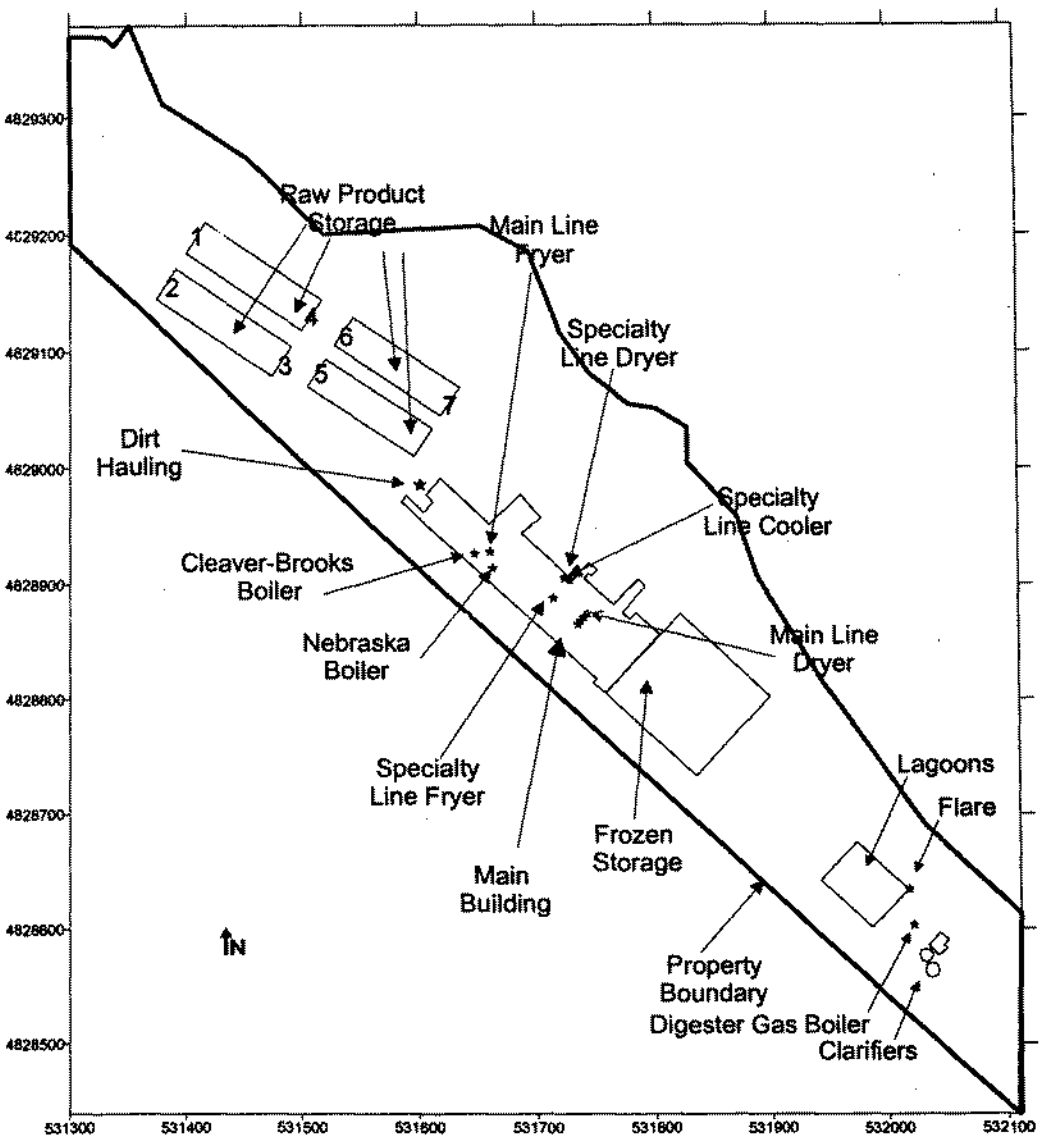

Figure 2. J.R. Simplot-Nampa Site Plan.

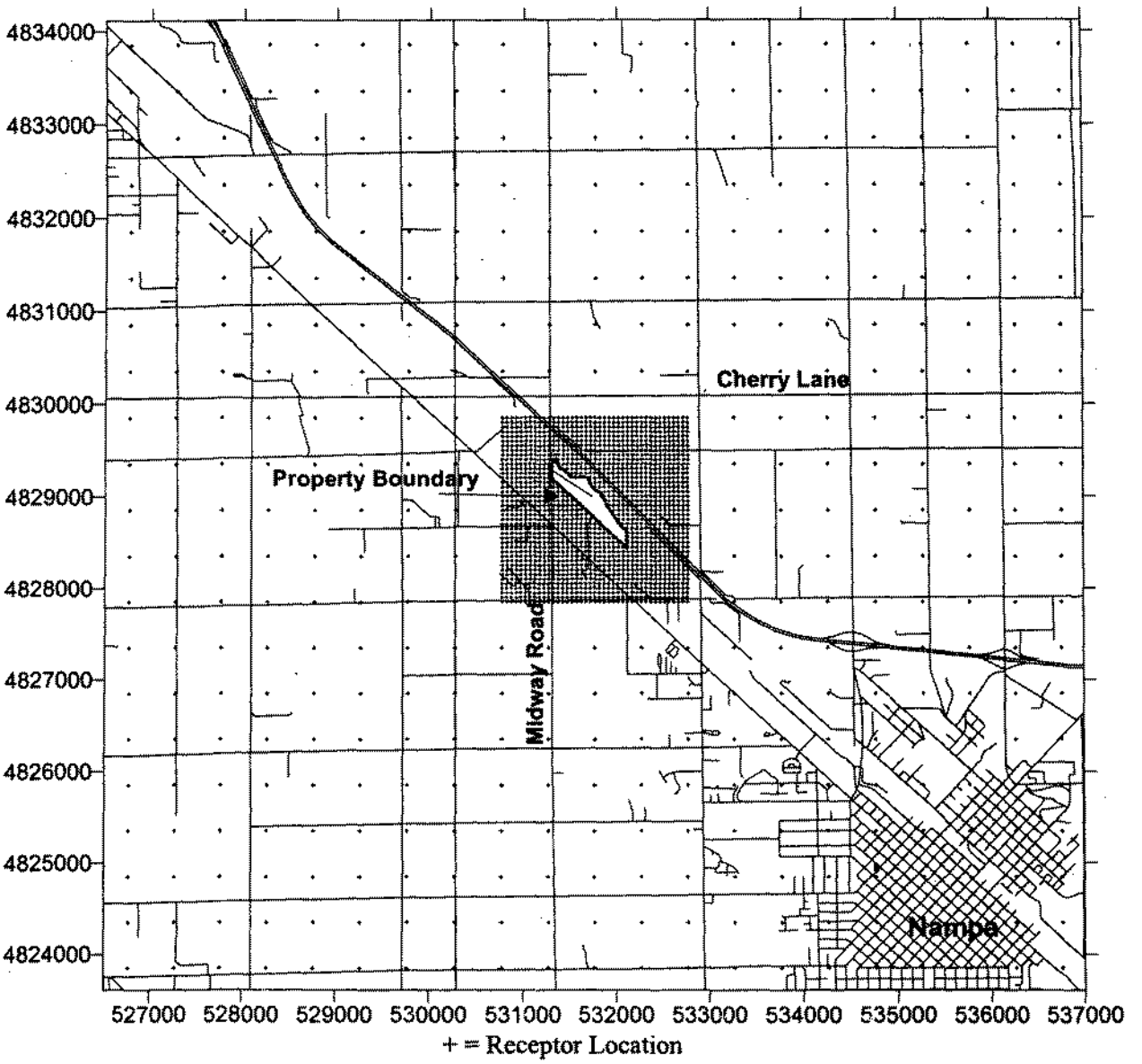

Figure 3. Receptor Locations

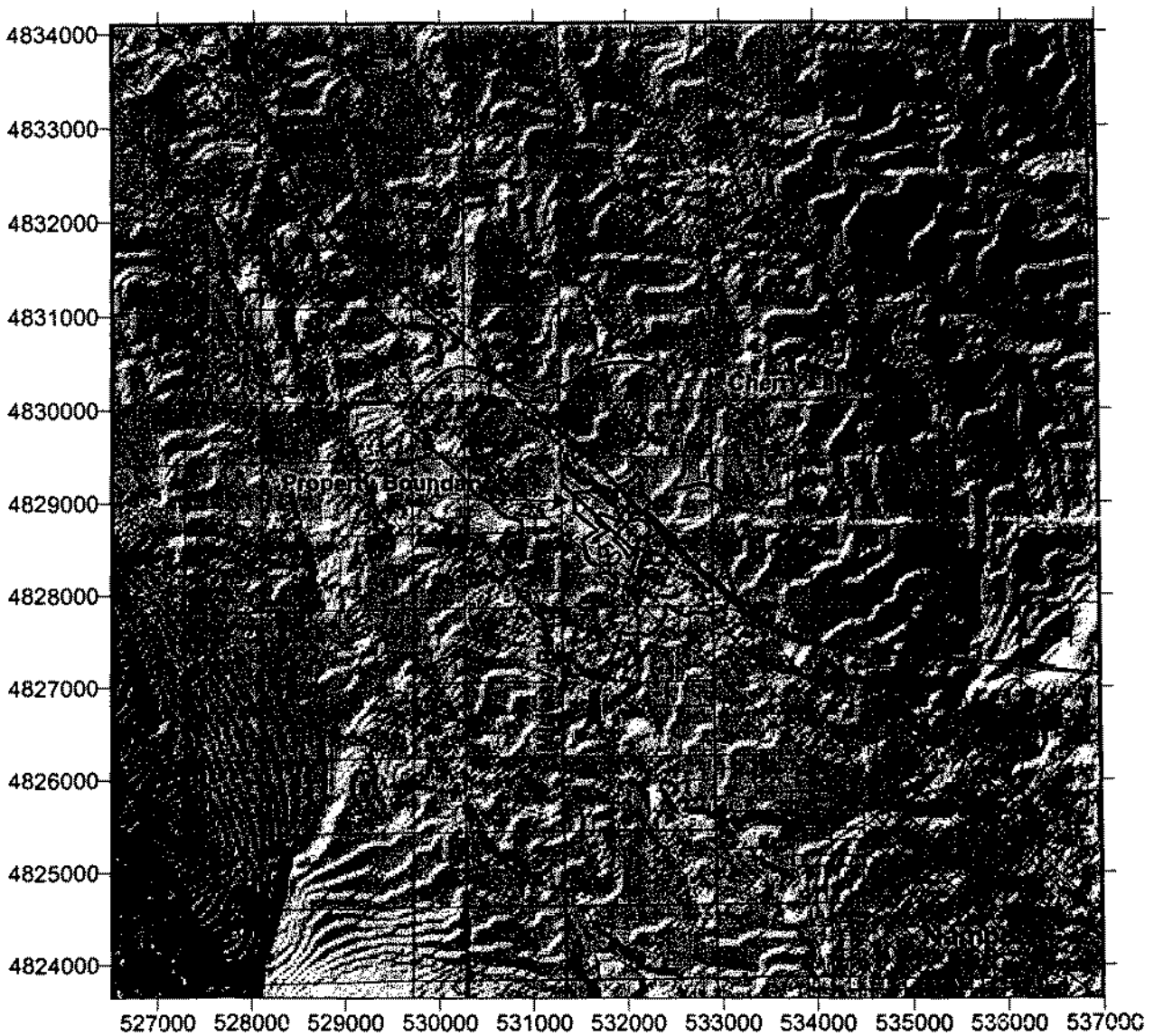

Figure 4. 24-Hour Average Hydrogen Sulfide Concentrations associated with the "Flare Flame-Out" Scenario (µg/m3)

August 29, 2002

STATE OF IDAHO
DEPARTMENT OF ENVIRONMENTAL QUALITY
RESPONSE TO PUBLIC COMMENTS
ON PROPOSED TIER II AIR QUALITY PERMIT AND PERMIT TO CONSTRUCT
FOR J. R. SIMPLOT, NAMPA, IDAHO

Introduction

As required by IDAPA 58.01.01.404.01 (*Rules for the Control of Air Pollution in Idaho*), the Idaho Department of Environmental Quality (DEQ) provided for public comment, including offering an opportunity for a hearing, a Tier II operating permit and permit to construct proposed for the J. R. Simplot facility located in Nampa, Idaho. Public comment packages, which included the application materials, and proposed permit and technical memorandum, were made available for public review at the DEQ's Boise Regional Office, and DEQ's State Office in Boise. A copy of the proposed permit and technical memorandum was also posted on DEQ's Web site. The public comment period was provided from June 31, 2002 through August 28, 2002, with no public hearing requested. Those comments regarding the air quality aspects of the draft permit are provided below with DEQ's response immediately following.

Public Comments and DEQ Responses

The following comments were received from Simplot:

- Comment: In Permit Condition 2.5, only the reference to IDAPA 58.01.01.130.01 is applicable.
  - Response: The references to Section 131 (Excess Emissions), Section 133 (Startup, Shutdown), Section 134 (Upset, Breakdown), and Sections 135 and 136 (Excess Emission Reports and Records) are generally applicable and thus no changes have been made.
- Comment: Simplot has calculated NO_x emissions from the Air Makeup Units as 16.5 T/yr rather than the 15.8 T/yr in the permit.
  - Response: Since the details were not submitted, it is not clear why there is a difference. In any case, the difference is small and no test to determine compliance is required.
- Comment: Table 7.1 does not include fugitive PM emissions from dirt haul, potato storage and delivery and paved roads.
  - Response: These emissions are small (< 1.5 T/yr) and do not count toward major source status.